Utility of IN-SPIRE™ for NIH Funding Portals on Health Disparities Research

Nara Gavini[1] PhD; Manjit Hanspal[2] PhD; and George A. Mensah[1], MD

[1]Center for Translation Research and Implementation Science , [2]Division of Blood Diseases and Resources , NHLBI

Background

IN-SPIRE™ provides tools for exploring textual data, to rapidly discover hidden information relationships that may help strategic planning and research funding trends. It provides effective ways to explore and understand a large collection of text into meaningful visualization thematic clusters. We utilized the IN-SPIRE™ to conduct an observational analysis of grants funded by the NIH (over 2000 grants) and by NHLBI (over 100 grants) in the health disparities research.

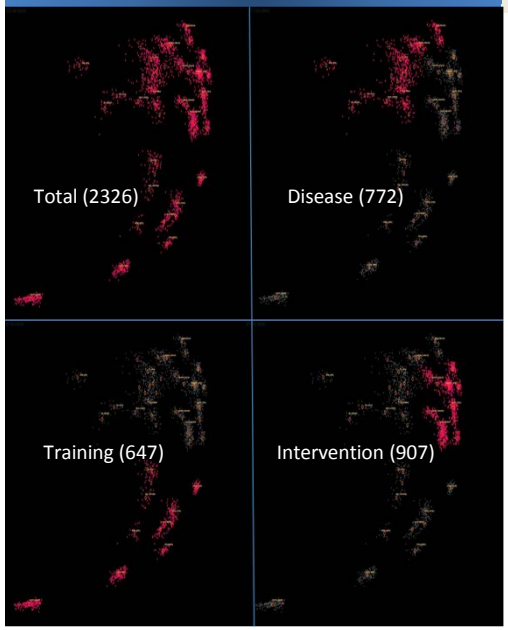
Methods

We obtained grant-specific award and funding data from the NIH Query View Report (QVR) and the RePORTER website. We searched the QVR database using the following search criteria: (1) all Research Condition and Disease Categorization (RCDC) terms for health disparities; (2) competing projects; (3) awarded by all ICs, and (4) awarded from FY 2009 to 2013.

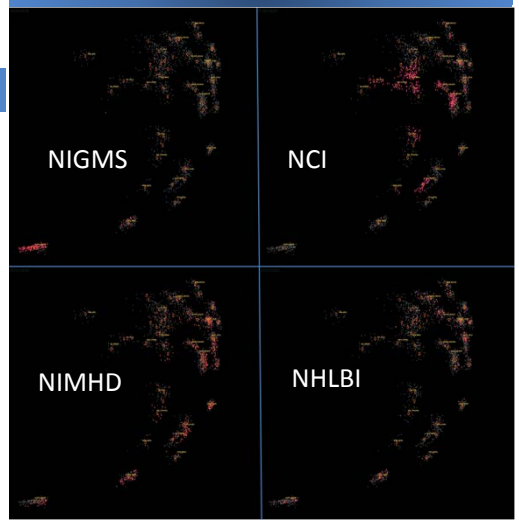
Data Analysis

We used IN-SPIRE™, Version 5 software to visualize and analyze the QVR-generated data on health disparities related grants. IN-SPIRE identifies key thematic terms within a document collection and then visually organizes the documents based upon term usage. This technique highlights common themes and reveals hidden relationships within the text. NHLBI grants from each machine-generated cluster were analyzed manually to ascertain thematic commonality among them.

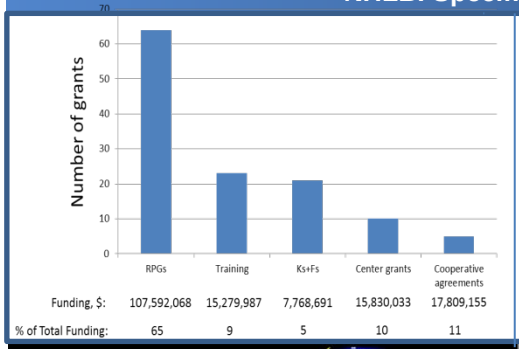
Thematic Distribution of NIH Grants

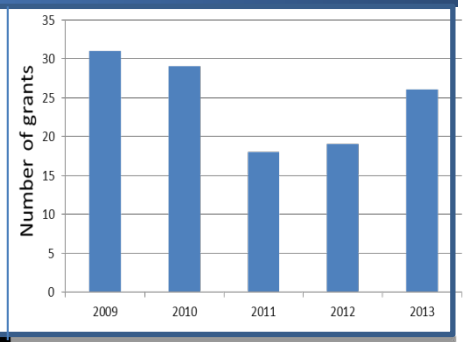


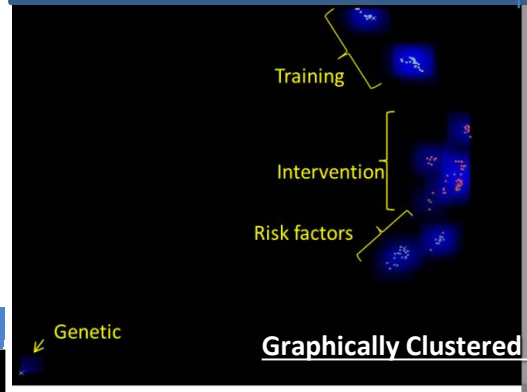
IC Contributions to Thematic Areas

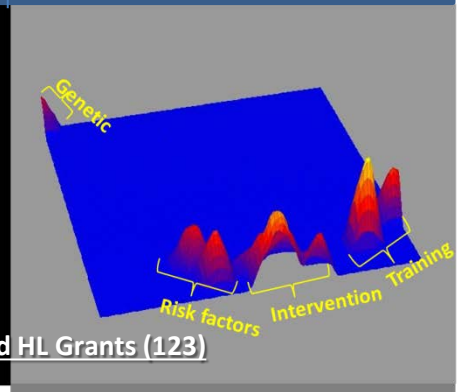


NHLBI Specific Grants

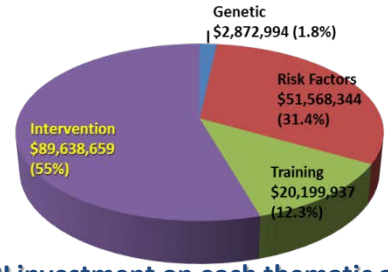




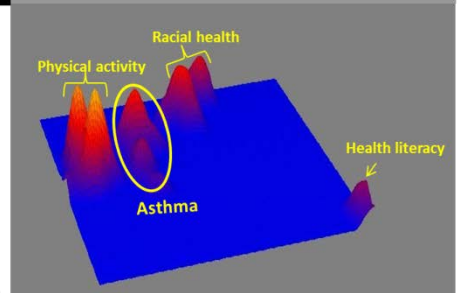




Graphically Clustered HL Grants (123)



NHLBI investment on each thematic area



Sub-clustering of Intervention set

Conclusions

The NIH-supported health disparities research portfolio has provided a close look at the funding history, thematic research areas and mechanisms utilized towards reducing health disparities. The NHLBI is using multiple mechanisms to support health disparities research focusing on risk factors, developing effective intervention strategies, and training health professionals of diverse backgrounds.